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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,316

07/26/2006

Souichi Iwasa

AI-423NP

4729

23995

7590

03/28/2008

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EXAMINER

BOEHLER, ANNE MARIE M

ART UNIT

PAPER NUMBER

3611

MAIL DATE

DELIVERY MODE

03/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,316	Applicant(s) IWASA ET AL.	
	Examiner Anne Marie M. Boehler	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/26/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3611

1. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, last two lines, applicant recites "relatively great" and "relatively small" interfaces. However applicant does not clearly recite that they are great or small relative to each other. Similarly, in the rest of the claims, applicant recites features that are relatively great or small, but fails to indicate to what they are relatively sized.

In claim 1, fails to define what is meant by "interferences".

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joushita (USPN 7,228,933)

Joushita shows a power steering system 1 with a steering electric motor 15 having an output shaft 16, a speed reduction mechanism 18, with an input shaft 21, and a power transmission joint 44 that couples the input and output shafts. The joint includes a first annular engagement member 43, a second annular engagement member 44, and an elastic member 45 with an annular main body and engagement arms between the members. Power transmission faces of the engagement arms engage engagement projections on the engagement members.

Joushita fails to specifically disclose differences in the size of engagement surfaces or differences in thickness or spacing of the engagement arms or projections. However, mechanical systems are not perfectly manufactured and will include differences among parts, even those designed to be essentially the same in configuration. Therefore, it would have been obvious to one of ordinary skill in the art to manufacture the engagement arms and projections of the Joushita device with differences in surface configuration, thickness, and angular spacing, in order to avoid unnecessary difficulty and expense in manufacturing.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joushita as applied to claims 1-5, 8, and 9 above, and further in view of Byrom (USPN 2,135,634).

Joushita fails to teach cam surfaces on the engagement projections and the engagement arms.

Byrom teaches providing cam surfaces (curvature of the edges of the projections 14 and radial arms 20, as described in col2, lines 20-23), that can cause compression of the elastic member during axial movement of the engagement members.

It would have been obvious to one of ordinary skill in the art to provide the Joushita joint with cam surfaces on the engagement arms and engagement projections, as taught by Byron, in order to minimize friction and wear when the elastic member runs out of alignment.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsuboi, Kubota, Fuse, Zimmermann, Rivin, Quere, and Oomura show flexible joints on motor shafts.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne Marie M. Boehler whose telephone number is 571-272-6641. The examiner can normally be reached on 7:30-5:00, Monday-Thursday, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 571-272-6612. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anne Marie M. Boehler/
Primary Examiner, Art Unit 3611

Anne Marie M. Boehler
Primary Examiner
Art Unit 3611

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